

WHAT IS CLAIMED IS:

1. A medical apparatus comprising:

an objective lens having an optical axis, onto
which a luminous flux from a subject is incident;

5 a lens holding unit which holds the objective
lens;

an image-pickup element which picks up an optical
image formed by the objective lens, the image-pickup
element having an image-pickup surface;

10 an image-pickup element holding unit which holds
the image-pickup element; and

 a coupling unit which connects the lens holding
unit and the image-pickup element holding unit so that
the position of the optical axis of the optical image
15 is changed relative to the image-pickup surface of the
image-pickup element.

20 2. A medical apparatus according to claim 1,
wherein the coupling unit includes at least one elastic
member deformable by external force acting on the lens
holding unit.

25 3. A medical apparatus according to claim 1,
wherein the coupling unit includes a plurality of coil
springs arranged between the lens holding unit and
the image-pickup element holding unit, the coil springs
individually having tensile forces to pull the lens
holding unit and the image-pickup element holding unit,
the tensile forces being balanced to connect the

lens holding unit and the image-pickup element holding unit.

4. A medical apparatus according to claim 1,
wherein the coupling unit includes a plurality of bar-
shaped elastic members located between the lens holding
unit and the image-pickup element holding unit.
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5. A medical apparatus according to claim 1,
wherein the coupling unit includes a ring-shaped
elastic member located in a gap formed between the lens
holding unit and the image-pickup element holding unit.
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6. A medical apparatus according to claim 1,
which further comprises a guide device which regulates
relative movement of the lens holding unit and the
image-pickup element holding unit.

15 7. A medical apparatus according to claim 6,
wherein the guide device includes an adapter, attached
to one of the lens holding unit and the image-pickup
element holding unit and having a substantially
spherical outer peripheral surface, and a seat attached
20 to the other holding unit and having an inner
peripheral surface in a shape matching the
substantially spherical outer peripheral surface of the
adapter, the inner peripheral surface mating with the
outer peripheral surface.

25 8. A medical apparatus according to claim 7,
which further comprises a plurality of plate springs
which connect the seat and the image-pickup element

holding unit, are arranged substantially at right angles to the direction of the optical axis of the objective lens, and are deformed when subjected to external force in the direction of the optical axis of the objective lens, thereby moving the lens holding unit in the optical axis of the objective lens.

5 9. A medical apparatus according to claim 7, wherein the coupling unit includes at least one elastic member located near a region for the arrangement of the adapter and the seat.

10 10. A medical apparatus according to claim 1, which further comprises a relay optical system having an optical path which guides the luminous flux from the objective lens to the image-pickup element, the luminous flux passing through part of the optical path being afocal.

15 11. A medical apparatus according to claim 10, which further comprises a reflective member which reflects the luminous flux from the objective lens onto the image-pickup element, the reflective member being located on an optical path of the afocal luminous flux of the relay optical system.

20 12. A medical apparatus according to claim 10, wherein the coupling unit is located in a region corresponding to the optical path of the afocal luminous flux of the relay optical system.

25 13. A medical apparatus according to claim 1,

which further comprises a reflective member which reflects the luminous flux from the objective lens onto the image-pickup element, the reflective member being held in the lens holding unit.

5 14. A medical apparatus according to claim 1, which further comprises a reflective member which reflects the luminous flux emitted from the objective lens onto the image-pickup element, the reflective member being held in the image-pickup element holding
10 unit.

15 15. A medical apparatus according to claim 1, wherein the image-pickup element holding unit further comprises an imaging lens which forms an image of the luminous flux emitted from the objective lens on the image-pickup element.

16. A medical apparatus according to claim 1, wherein the lens holding unit includes an insertional section to be inserted into a body cavity.

20 17. A medical apparatus according to claim 1, wherein the image-pickup element holding unit includes a grip section to be held in a hand.

18. A medical apparatus comprising:
an objective lens onto which a luminous flux from a subject is incident;
25 an image forming means which forms an image based on the luminous flux incident on the objective lens;
an image-pickup means which picks up the image,

the image-pickup means having an image-pickup surface;

a first supporting means which supports the objective lens;

5 a second supporting means which supports the image-pickup means; and

a coupling means which connects the first and second supporting means so that the objective lens and the image-pickup means are optically coupled to each other, the coupling means being elastically deformed so that the image moves on the image-pickup surface relatively in accordance with external force acting on the first supporting means.

19. A medical apparatus comprising:

an objective lens onto which a luminous flux from 15 a subject is incident;

a lens holding frame which holds the objective lens;

20 an image-pickup element which picks up an optical image formed by the objective lens, the image-pickup element having an image-pickup surface;

an image-pickup element holding frame which holds the image-pickup element; and

25 a coupling unit which connects the lens holding frame and the image-pickup element holding frame so that the position of the optical image is changed relative to the image-pickup surface of the image-pickup element.

20. A medical apparatus comprising:

an objective lens onto which a luminous flux from
a subject is incident;

5 an image forming lens which forms an image based
on the luminous flux incident on the objective lens;

 an image-pickup device which has an image-pickup
surface to pick up the image;

 a first housing which supports the objective lens;

10 a second housing which supports the image-pickup
device so that the image-pickup device picks up the
image; and

 a coupler which connects the first and second
housing so that the objective lens and the image-pickup
device are optically coupled to each other, the coupler
15 being elastically deformed so that the image moves on
the image-pickup surface relatively in accordance with
external force acting on the first housing.